

Bankstahl et al.

S/N: 10/805,690

In the Claims

1. (Currently Amended) A liquid separator for separating liquid from a stream of fluid comprised of liquid and gaseous components, said liquid separator comprising:

a cylindrical housing having an upper portion, a bottom and an inner surface;

an inlet located in said cylindrical housing for receiving the stream of fluid;

a liquid outlet in the bottom of said cylindrical housing to remove liquid from said cylindrical housing, said liquid outlet being located generally centrally in said bottom;

a fluid outlet located in the upper portion of said cylindrical housing for removing the stream of fluid therefrom;

a deflector baffle within the cylindrical housing proximate to said inlet to direct the stream of fluid so as to flow generally circularly and downwardly around the inner surface of said cylindrical housing toward said liquid outlet; and

a plurality of radially directed baffles located at the bottom of said cylindrical housing to halt the circular motion of the stream of fluid from said inlet and to redirect the stream radially inwardly toward said liquid outlet whereby said liquid can be removed by means of said liquid outlet and fluid separated therefrom can be removed from said fluid outlet, and an opening formed in each of the plurality of radially directed baffles, the opening positioned proximate the liquid outlet and constructed to allow uninterrupted liquid flow thereto.

2. (Previously Presented) The liquid separator of claim 1 wherein said inlet is located in the upper portion of said cylindrical housing.

3. (Previously Presented) The liquid separator of claim 1 wherein said radially directed baffles are located in a lower chamber formed in said housing.

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4. (Previously Presented) The liquid separator of claim 3 wherein said radially directed baffles have upper edges and said lower chamber is formed by a baffle plate affixed to said upper edges of said radially directed baffles.

5. (Currently Amended) The liquid separator of claim 4 wherein said baffle plate is circular forming an annular slot between the baffle plate and the inner surface of said cylindrical housing.

6. (Previously Presented) The liquid separator of claim 4 wherein said baffle plate has a diameter a predetermined dimension smaller than the diameter of said inner surface of said cylindrical housing to form an annular slit between said circular plate and said inner surface of said housing.

7. (Previously Presented) The liquid separator of claim 6 wherein said radially directed baffles form radial channels within the bottom of said housing to direct the stream of fluid radially inwardly toward said liquid outlet.

Claims 8-23 (canceled)

24. (Currently Amended) An oil separator comprising:
a housing having an inlet, an oil outlet, and a fluid outlet;
a first baffle positioned proximate the inlet and constructed to direct a fluid flow from the inlet about an inner surface of the housing; and
a second baffle positioned about the oil outlet and configured to direct a flow of oil carried on the fluid flow about the inner surface of the housing toward the oil outlet and a remaining fluid flow toward the fluid second outlet; and
a plate attached to the second baffle and extending generally transverse thereto such that the second baffle does not extend therebeyond.

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25. (Currently Amended) The oil separator of claim 24 wherein the ~~second~~ baffle further comprises a plate ~~is positioned between the inlet and the oil outlet~~, the plate forming ~~having~~ an opening between an outer edge of the plate and the inner surface of the housing.

26. (Currently Amended) The oil separator of claim 25 wherein the opening ~~in the plate~~ extends about the entire perimeter of the plate.

27. (Currently Amended) The oil separator of claim 24 wherein the second baffle further comprises a plurality of radial ribs wherein a channel is formed between adjacent ribs and is in fluid communication with adjacent channels about the oil first outlet.

28. (Currently Amended) The oil separator of claim 24 wherein the oil first outlet and fluid second outlet are on generally opposite sides of the housing.

29. (Currently Amended) The oil separator of claim 24 further comprising a mounting plate attached to an exterior surface of the housing and constructed to allow the separator to be mounted with the oil first outlet at an elevation lower than an elevation of the inlet and the fluid second outlet.

30. (Currently Amended) An oil separator comprising:
an enclosure having a first chamber and a second chamber, the first chamber constructed to centripetally separate an incoming flow of two fluids; and
a non-perforated partition positioned between the first chamber and the second chamber and ~~having forming an an~~ opening therebetween about a periphery of the partition, the partition constructed to maintain the centripetal separation generated in the first chamber.

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31. (Previously Presented) The oil separator of claim 30 further comprising a baffle positioned in the first chamber constructed to direct the incoming flow in a direction generally tangential to the enclosure.

32. (Previously Presented) The oil separator of claim 30 wherein the partition has a shape that substantially matches a cross-sectional shape of the enclosure.

33. (Previously Presented) The oil separator of claim 30 further comprising an air outlet in fluid communication with the first chamber and an oil outlet in fluid communication with the second chamber.

34. (Previously Presented) The oil separator of claim 30 further comprising a plurality of baffles formed in the second chamber constructed to radially redirect a flow through the opening between the first chamber and the second chamber.

35. (Previously Presented) The oil separator of claim 30 wherein the first chamber is located above the second chamber.

36. (Previously Presented) The oil separator of claim 30 further comprising a mounting bracket extending from the enclosure constructed to mount the separator to a welding apparatus with the first chamber at an elevation above the second chamber.